WHAT IS CLAIMED IS:

1. An image processor for detecting a circular pattern in an image comprising:

a binarization unit which binarizes input image data to provide bi-level image data;

a counter which counts pixels having a predetermined value in a block of a polygon having n vertices in the bi-level image data, wherein n denotes a natural number equal to or larger than eight; and

a controller which decides, based on a number of the pixels having the predetermined value counted by said counter, whether the circular pattern is detected in the image or not.

2. The image processor according to claim 1, wherein the polygon is an octagon.

3. The image processor according to claim 1, wherein the polygon is a hexadecagon.

4. The image processor according to claim 1, wherein the predetermined value in the bi-level image data is one.

5. The image processor according to claim 1, wherein the predetermined value in the bi-level image data is zero.

6. A method of image processing to detect a circular pattern in an image comprising the steps of:

binarizing input image data to provide bi-level image data;

counting pixels having a predetermined value in a block of a polygon having n vertices in the bi-level image data, wherein n denotes a natural number equal to or larger than eight; and

deciding, based on a number of the pixels having the predetermined value, whether the circular pattern is detected in the image or not.

7. The method according to claim 6, wherein the polygon is an octagon.

8. The method according to claim 6, wherein the predetermined value in the bi-level image is one.

9. A recording medium storing a program to be executed by a computer, the program comprising the steps of:

binarizing input image data to provide bi-level image data;

counting pixels having a predetermined value in a block of a polygon having n vertices in the bi-level image data, wherein n denotes a natural number equal to or larger than eight; and

deciding, based on a number of the pixels having the predetermined value, whether the circular pattern is detected in the image or not.

10. The recording medium according to claim 9, wherein the polygon is an octagon.

11. The recording medium according to claim 9, wherein

the predetermined value in the bi-level image is one.

12. An image processor for detecting a specified pattern in an image comprising:

a controller which sets a detection window in input image data to detect the specified pattern and moves the detection window successively by a predetermined number of pixels; and

a detector which scans the image data from each side of the detection window towards the center thereof to detect a rim of the specified pattern;

wherein said controller decides a width of scan until which said detector detects a rim of the specified pattern, in a direction in correspondence to the moving direction of the detection window, and changes a moving distance of the detection window based on the decided width of scan.

13. The image processor according to claim 12, wherein the detection window is a quadrilateral window, and said detector scans in directions from four sides of the detection window towards the center thereof to detect a rim of the specified pattern.

14. The image processor according to claim 12, wherein the image data are bi-level image data obtained by binarization with respect to color of the specified pattern.

15. An image processor for detecting a specified

pattern in an image comprising:

a controller which sets a quadrilateral detection window to detect the specified pattern and moves the detection window successively by a predetermined number of pixels; and

a detector which scans the image from each side of the detection window towards the center thereof to detect a rim of the specified pattern;

wherein said detector detects the rim of the specified pattern first in a moving direction of the detection window and next in a direction vertical to the moving direction.

16. The image processor according to claim 15, wherein said controller decides a width of scan, until which said detector detects the rim of the specified pattern, in a direction in correspondence to the moving direction of the detection window, and changes a moving distance of the detection window based on the decided width of scan.

17. The image processor according to claim 15, wherein when a rim of the specified pattern is not detected in the moving direction of the detection window, said detector cancels detection of a rim of the specified pattern in a direction different from the moving direction.

18. The image processor according to claim 15, wherein the image data are bi-level image data obtained by

binarization with respect to a color of the specified pattern.

19. A method of image processing to detect a specified pattern in an image comprising the steps of:

setting a detection window to detect the specified pattern and moving the detection window successively by a predetermined number of pixels;

scanning the image from each side of the detection window towards the center thereof to detect a rim of the specified pattern;

deciding a width of scan until the rim of the specified pattern is detected, in a direction in correspondence to the moving direction of the detection window; and

changing a moving distance of the detection window based on the decided width of scan.

20. A recording medium storing a program to be executed by a computer, the program comprising the steps of:

setting a detection window to detect the specified pattern and moving the detection window successively by a predetermined number of pixels;

scanning the image from each side of the detection window towards the center thereof to detect a rim of the specified pattern;

deciding a width of scan until the rim of the

specified pattern is detected, in a direction in correspondence to the moving direction of the detection window; and

changing a moving distance of the detection window based on the decided width of scan.

21. A method of image processing to detect a specified pattern in an image comprising the steps of:

setting a quadrilateral detection window to detect the specified pattern and moving the detection window successively by a predetermined number of pixels; and

scanning the image from each side of the detection window towards the center thereof to detect a rim of the specified pattern;

wherein the rim of the specified pattern is detected first in a moving direction of the detection window and next in a direction vertical to the moving direction.

22. A recording medium storing a program to be executed by a computer, the program comprising the steps of:

setting a quadrilateral detection window to detect the specified pattern and moving the detection window successively by a predetermined number of pixels; and

scanning the image from each side of the detection window towards the center thereof to detect a rim of the specified pattern;

wherein the rim of the specified pattern is

detected first in a moving direction of the detection window and next in a direction vertical to the moving direction.